

# PATENT COOPERATION TREATY

From the:  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:  
  
Rodyk & Davidson  
9 Raffles Place  
#55-01 Republic Plaza  
SINGAPORE 048619

## PCT NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing  
*day/month/year*      23 MAY 2001

Applicant's or agent's file reference  
LAM/99058235

### IMPORTANT NOTIFICATION

International Application No.  
PCT/SG00/00012

International Filing Date  
31 January 2000

Priority Date  
2 February 1999

Applicant  
SINGAPORE POLYTECHNIC et al

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translations to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide

Name and mailing address of the IPEA/AU  
AUSTRALIAN PATENT OFFICE  
PO BOX 200, WODEN ACT 2606, AUSTRALIA  
E-mail address: pct@ipaustalia.gov.au  
Facsimile No. (02) 6285 3929

Authorized officer

R.P. ALLEN

Telephone No. (02) 6283 2134

## BEST AVAILABLE COPY

**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference LAM/99058235	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No. PCT/SG00/00012	International Filing Date ( <i>day/month/year</i> ) 31 January 2000	Priority Date ( <i>day/month/year</i> ) 2 February 1999
International Patent Classification (IPC) or national classification and IPC Int. Cl. <sup>7</sup> B22D 41/015, 41/62		
Applicant SINGAPORE POLYTECHNIC et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (s Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of 4 sheet(s).

3. This report contains indications relating to the following items:
- |      |                                     |   |
|------|-------------------------------------|---|
| I    | <input checked="" type="checkbox"/> | Basis of the report   |
| II   | <input type="checkbox"/>            | Priority  |
| III  | <input type="checkbox"/>            | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| IV   | <input checked="" type="checkbox"/> | Lack of unity of invention  |
| V    | <input checked="" type="checkbox"/> | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| VI   | <input type="checkbox"/>            | Certain documents cited   |
| VII  | <input checked="" type="checkbox"/> | Certain defects in the international application  |
| VIII | <input type="checkbox"/>            | Certain observations on the international application   |

Date of submission of the demand 30 August 2000	Date of completion of the report 15 May 2001
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer  R.P. ALLEN Telephone No. (02) 6283 2134

**BEST AVAILABLE COPY**

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SG00/00012

## I. Basis of the report

1. With regard to the elements of the international application:\*

- ☐ the international application as originally filed.
- ☒ the description, pages 1-8, as originally filed,  
pages , filed with the demand,  
pages , received on with the letter of
- ☒ the claims, pages , as originally filed.  
pages , as amended (together with any statement) under Article 19,  
pages , filed with the demand,  
pages 9-12, received on 25 April 2001 with the letter of 25 April 2001
- ☒ the drawings, pages 1-2, as originally filed,  
pages , filed with the demand,  
pages , received on with the letter of
- ☐ the sequence listing part of the description:  
pages , as originally filed  
pages , filed with the demand  
pages , received on with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, was on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SG00/00012

## IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

The international application does not comply with the requirements of unity of invention because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept. In coming to this conclusion the International Searching Authority has found that there are different inventions as follows:

1. Claims 1-28. It is considered that the means for providing a high frequency alternating current and means for superimposing a direct current comprises a first "special technical feature".
2. Claims 29-30. It is considered that the means for oscillating the position of the electrode comprises a second "special technical feature".

Since the abovementioned groups of claims do not share any of the technical features identified, a "technical relationship" between the inventions, as defined in PCT rule 13.2 does not exist. Accordingly the international application does not relate to one invention or to a single inventive concept, a priori.

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☒ all parts.
- ☐ the parts relating to claims Nos.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SG00/00012

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims 2-12, 14-28	YES
	Claims 1, 13, 29-30	NO
Inventive step (IS)	Claims 2-12, 14-28	YES
	Claims 1, 13, 29-30	NO
Industrial applicability (IA)	Claims	YES
	Claims	NO

### 2. Citations and explanations (Rule 70.7)

#### Citations

- (a) Patent Abstract of Japan, JP 63-144855 A (NIPPON KOKAN KK) 17 June 1988 & JP 63-144855 A
- (b) EP 18450 A1 (IWATANI SANGYO KK) 12 November 1980
- (c) GB 1035875 A (INTERNATIONAL BUSINESS MACHINES CORPORATION) 13 July 1966
- (d) US 5846287 A (KUMAR et al.) 8 December 1998
- (e) US 4670884 A (LETIZIA et al.) 2 June 1987
- (f) US 3683094 A (SCHLIENGER) 8 August 1972
- (g) US 4700769 A (OHARA et al.) 20 October 1987
- (h) Derwent Abstract Accession No. 18928W/11, Class M24, SU 429099 A, (CHELYABINS METALLURG WK) 15 October 1974
- (i) US 4110546 A (STENKVIST) 29 August 1978
- (j) US 5168917 A (OKUDA et al.) 8 December 1992
- (k) Patent Abstract of Japan, JP 56-151162 A (NAKASEKO ISAO) 24 November 1981
- (l) US 4572673 A (PORTER et al.) 25 February 1986

#### Novelty & Inventive Step

##### Claims 1 & 13

Citation (a) discloses all of the features of these claims.

##### Claims 29-30

Citations (c) & (h) disclose all of the features of these claims.

##### Claims 2-12 & 14-28

of any of these claims.

None of the citations, or obvious combination thereof, disclose all of the features of any of these claims.

BEST AVAILABLE COPY

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SG00/00012

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Claims 27-28 do not comply with Rule 6.2(a) because the claims should not rely on references to the description or the drawings.